

Remarks

Upon entry of this amendment, claims 1, 4-14, and 16-45 are pending in the application.

Claim 1 stands rejected under 35 USC 112, first paragraph, as not being enabled. Claim 1 also stands rejected under 35 USC 112, second paragraph, as being indefinite. The Examiner interprets the supposed faulty language as "... a plurality of spaced apart conductors located across parallel planes ..., said plurality of spaced apart conductors comprising a first series of conductors extending in a first direction on a plane and a second series of conductors extending in a second, different, direction on another plane." (Emphasis in original) Office action dated March 29, 2011, p. 3.

Applicant notes, however, that the Examiner's interpretation of the claim was taken out of context from the other limitations of the claim. Therefore, Applicant asserts the Examiner's interpretation, when amended into the claim, does not completely address the asserted Section 112 rejections. Accordingly, Applicant has amended claim 1 slightly different from the Examiner's interpretation.

More specifically, amended claim 1 now recites

- "a first series of conductors extending in a first direction on a first plane",
- "a second series of conductors extending in a second, different, direction on a second plane", and
- "said second plane [is] substantially parallel to said first plane".

Applicant asserts amended claim 1 overcomes the Section 112 rejections and requests the Examiner to withdraw the same. If the Examiner disagrees or believes any other Section 112 rejections exist with the pending claims, then Applicant invites the Examiner to contact Applicant's representative to address the Examiner's concerns before issuing another Section 112 rejection.

Claim 1 stands rejected under 35 U.S.C. 103(a) as being unpatentable over US Publication No. 2003/0231170 (Yoshikawa) in view of US Publication No. 2003/0112226 (Le-Pailleur) and further in view of US Publication No. 2004/0017364 (Tanaka). Applicant traverses the Examiner's rejection. Applicant asserts that the subject matter of amended claim 1, as a

whole, was not obvious to the skilled artisan over Yoshikawa in view of Le-Pailleur and further in view of Tanaka. Not only do these documents fail to teach all of the claimed subject matter, the skilled artisan would not combine the teachings to arrive at the claimed subject matter.

First, it is noted that the Examiner acknowledges that claim 1 is not taught by Yoshikawa in view of Tanaka since the Examiner added the additional reference of Le-Pailleur to his prior rejection. The newly cited document, Le-Pailleur, relates to a touch-sensitive detector having first and second modes of operation, whereby finger contact is detected when the finger is in contact with the detection surface such that it can communicate a wave that has been omitted from an electrode (E1 and E2 in Figure 1) to a detector (D1 and D2). Therefore, the touch-sensitive detector operating in the modes is not a capacitive touchpad as currently claimed.

Le-Pailleur discloses a “conducting element” in paragraphs 8, 9 and 18 and also a “conducting part” in paragraphs 31 to 33. It is believed that the conducting part and conducting element relate to the same feature, which is labelled with reference 3 in Figure 1. Paragraphs 8, 9, and 18 disclose interaction capacitors being formed between electrodes and the conducting element. However, there is no disclosure of how these interaction capacitors are utilized by the touch-sensitive detector. In fact, the only disclosure of the relevance of the interaction capacitance is in paragraph 33, which states that “the power consumption depends on the interaction capacitance between the electrodes activated to emit the wave and the conducting parts”. As discussed throughout Le-Pailleur, different electrodes can be activated for different modes of operation, and paragraph 33 discusses how the power consumption depends on the mode of operation (that is, the electrodes that are activated) due to the internal capacitance.

There is little teaching in Le-Pailleur as to the effect of providing the “conducting part” / “conducting element”. What teaching there is suggests that the interaction capacitance between the electrodes and conducting parts merely affects the power consumption of the device. The skilled artisan would not, therefore, find any motivation to combine this feature of Le-Pailleur with those of Tanaka and Yoshikawa as a means to modify the capacitive environment of the electrodes in order to improve the accuracy and speed of touch detection of the system, for example, which is an objective of the present invention (see page 3, lines 12-15 of the specification as filed).

For the first and second modes of operation of Le-Pailleur that are discussed above, the conducting parts (3) of Le-Pailleur cannot be considered as relevant to the electrically conductive medium as presently claimed as it does not “concentrate an electric field between said plurality of spaced apart conductors towards the plane of said supporting medium”, nor is it “adapted to locally modify a capacitive environment between a subset of said plurality of spaced apart conductors”.

Le-Pailleur discloses another mode of operation, which in paragraph 29 is referred to as a third touch-sensitive detection mode. “In the third touch-sensitive detection mode, the electrode controller allows detection of a contact of an external element with the detection surface at two electrodes by the change, upon contact, in an impedance between the two electrodes”. Paragraph 40 goes on to state that “in standby mode, the contact of the finger 10 of the user with the detection surface 2 is detected by the variation in an impedance between the two groups of electrodes. The impedance detected is of a resistive or capacitive nature depending on the embodiment of the detection surface 2, or of an intermediate nature with a resistive component and a capacitive component”.

That is, the third mode of operation of Le-Pailleur can relate to the capacitive interaction between two electrodes that are in the same plane. It is clearly evident from the figures of Le-Pailleur and the associated description that the electrodes are always in the same plane. Therefore, the conducting parts (3) of Le-Pailleur still cannot be considered as relevant to the electrically conductive medium as presently claimed because they cannot concentrate an electric field between said plurality of spaced apart conductors towards the plane of the supporting medium and cannot locally modify a capacitive environment between a subset of the spaced apart conductors.

Le-Pailleur does not include a first and second series of conductors, whereby the second series of conductors are in a different plane to the first series of conductors, as now claimed. The difference in configuration between the electrodes of Le-Pailleur and of Yoshikawa provides further reason why the skilled artisan, starting with the teaching of Yoshikawa, would find no motivation to combine that teaching with the conducting parts (3) of Le-Pailleur. Le-Pailleur discloses electrodes (E1, E2) which interact with detectors (D1, D2), and that the consumed power depends upon the interaction between the electrodes and the conducting parts (3). Yoshikawa is directed to the interaction between the electrodes (6, 7) and the stylus pen (9). It is not clear that the combination of electrodes (6, 7) of Yoshikawa with conductive parts (3) of

Le-Pailleur would lead to improved power consumption, let alone to improve the accuracy and speed of touch detection, because of the very different structure and function of the two sets of electrodes.

It is further noted that the conductive medium of Le-Pailleur also does not have a resistivity in the range of 100 ohms per square to 10,000,000 ohms per square.

Applicant submits that the significant differences between the teaching of Le-Pailleur and the claimed subject matter, as well as the significant differences between Le-Pailleur and Yoshikawa lead to a conclusion that the teachings of Le-Pailleur, both alone and in combination with Yoshikawa, should not be considered as relevant to the obviousness of the claimed subject matter. Following the above discussion and contrary to the Examiner's assertions on pages 5-6 of the final Office action, the significant differences include:

- Le-Pailleur is not a capacitive touch pad with a first and second series of conductors extending in different directions in different planes;
- any electrically conductive medium in Le-Pailleur does not provide the same functionality as defined by claim 1; and
- any conductive medium in Le-Pailleur does not have a resistivity in the range of 100 ohms per square to 10,000,000 ohms per square.

Applicant's comments in relation to the combination of the teachings of Tanaka and Yoshikawa, and why they should not be considered together as relevant to the obviousness of the present application are essentially the same as those put forward in the response dated 24 February 2011. These comments are incorporated herein by reference. It is noted that no significant comments have been put forward by the Examiner in the final Office action in response to the Applicant's submissions of the response dated 24 February 2011. Instead, the Examiner simply added the Le-Pailleur reference and issued the new rejection.

Further, Applicant respectfully submits that the skilled artisan would not expect that the inclusion of the conductive medium, with a specific resistivity value, of Tanaka into the device of Yoshikawa or Le-Pailleur would "improve the accuracy of a pointing object detection and to reduce cost of design, engineering, parts, and manufacturing processes" as suggested on page 6 of the final Office action; there is simply no teaching in any of the prior art to this effect.

Applicant respectfully submits that Tanaka, which relates to resistance film touch panels, does not disclose a “conductive medium... to concentrate an electric field between said plurality of spaced apart conductors towards the plane of said supporting medium and adapted to locally modify a capacitive environment between a subset of said plurality of spaced apart without distortion of said conductive medium”. This submission is based at least on the fact that Tanaka does not relate to capacitive touchpads and therefore the transparent conductive films of Tanaka are arranged to be pressed together to detect a data position at the point of contact between the transparent conductive films (paragraph [0316]).

Applicant respectfully submits that when independent claim 1 is properly construed as a whole, the cited prior art documents would not render the conductive medium that includes all of the technical limitations defined by amended claim 1 as obvious. Applicant submits that it is inappropriate, and does not give a true reflection of the claimed subject matter, to split up the technical definition of the conductive medium that is provided by claim 1 and suggest that claim 1 is obvious over the three cited prior art documents. Applicant respectfully submits that the following facts, as they apply to the present case, should not destroy the patentability of the claimed invention: the conductive medium is not disclosed at all in a first prior art document (Yoshikawa), however a different type of conductive medium in a different type of device is disclosed in a second prior art document (Le-Pailleur), and a conductive medium having a resistivity in the range that is covered by the claims is disclosed in a third prior art document (Tanaka). The third prior art document (Tanaka) also does not relate to the same type of device as claimed.

Accordingly, Applicant asserts the Examiner erred in his findings; particularly that the Examiner erred in his interpretation of the references, erred in his reasoning for combining the references, and did not consider the references as a whole when combining the references. One of ordinary skill in the art at the time the invention was made would not combine the teachings of Yoshikawa, Le-Pailleur, and Tanaka to arrive at the claimed subject matter. Applicant asserts amended claim 1 is patentable and requests the Office to indicate the same.

Claims 4-14 and 16-45 all depend from claim 1, are patentable for at least the same reasons as claim 1, and for other reasons not discussed within this response.

Lastly, this response is being filed after a final rejection and with a request for continued examination. If the Examiner believes the Application does not warrant a notice of allowance

and intends to issue a new action, then Applicant invites the Examiner to contact Applicant's representative to discuss the application before issuing the new action.

Conclusion

In view of the above amendments and remarks, claims 1, 4-14, and 16-45 are allowable over the cited art. Applicant respectfully requests reconsideration on the merits and allowance of the pending claims.

Respectfully submitted,

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